24.2120

S/056/62/043/001/015/056
B125/B102

AUTHORS: Pokrovskiy, V. L., Ryvkin, M. S.

TITLE: Thermodynamics of anisotropic superconductors

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 1(7), 1962, 92-104

TEXT: In the low-temperature region, V. L. Pokrovskiy's theory of anisotropic superconductors (ZhETF, 40, 641, 1961) is usually in good agreement with experimental results. No such agreement is found at temperatures close to the critical temperature T_{crit}.. For example, the inequalities $\Delta C/C_n (T_{crit})$ for the discontinuity of the specific heat at T_{crit} and the universal inequality $(1.4C_n (T_{crit})/\Delta C-1)/2 \geqslant \ln(0.94\chi)$ near T_{crit} are no longer valid for many elements. Coulomb interaction of electrons and the possible formation of Cooper pairs in asymmetric states do not change the results of the "anisotropic" theory, especially not the universal relations. The contribution of higher approximations is always

Card 1/2

small when T and T_{crit} differ only slightly and increases Q(0) by $\sim ga^2$ (g = coupling constant, a = anisotropy constant) when $T \ll T_{crit}$. The discrepancy between theory and experiment at temperatures close to T_{crit} is probably due to the fact that near T_{crit} the quasi-particle concept is not applicable. There are 2 tables.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Radiophysics and Electronics of the Siberian Department of the Academy of Sciences USSR)

SUBMITTED: November 23, 1961 (initially),
March 15, 1962 (after revision)

S/056/62/043/003/059/063
B104/B102

AUTHORS: Patashinskiy, A. Z., Pokrovskiy, V. L., Khalatnikov, I. M.

TITLE: Regge poles in nonrelativistic quantum mechanics

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 1117-1119

TEXT: A method of examining the position of the poles in the complex momentum plane for a large class of potentials was worked out. This method is closely related to that previously established by V. L. Pokrovskiy and I. M. Khalatnikov (ZhETF, 40, 1713, 1961). The nonanalytical potential $U = U_0 < 0$ for $r<a$ and $U = 0$ for $r>a$ is studied on the basis of a semi-classical approximation to Schrödinger's radial equation. From the equations

$$x_1 J_\nu'(x_1)/J_\nu(x_1) = xH_\nu^{(1)\prime}(x)/H_\nu^{(1)}(x), \quad x^2/a^2 = 2mE,$$
$$x_1^2/a^2 = 2m(E - U_0). \qquad (3)$$

Card 1/3

Regge poles in nonrelativistic...

it is concluded that three series of poles exist. The first series is to the left of $\nu = x_1$ (Fig. 1), the second in the upper semiplane above the point x asymptotically approaching the line $\mathrm{Im}\nu = -1$ at $U_0 < E < 0$. The third series is missing when $U_0 < E < 0$, but approximately symmetric with the second series when $E > 0$. An analytical potential $U(r)$ having singularities in the complex momentum plane is examined. When $E \gg U_0$ the poles are near to those values of ν at which the level line has two points of inversion, $r_1 \approx \nu/k$ and r_2 (Fig. 2). There are two series of poles in the upper semiplane. The first series extends to the left and downward of the point $\nu = kr_0$, $k^2 = 2mE$, approaching the real axis asymptotically. The second series is situated right and left of the point $\nu = kr_0$ where the asymptotes $\mathrm{Im}(\nu - kr_0) \sim n/\ln(n)$, $\mathrm{Re}(\nu - kr_0) \sim \mathrm{Im}(\nu - kr_0)/\ln(n)$. The position of the poles in the case of $\min U(r) < E < 0$ is the same as in the case of a potential well with negative energies. There are 2 figures.

Card 2/3

Fig. 2

L 13565-63 EWT(1)/FCC(w)/BDS AFFTC/ASD/ESD-3 IJP(c)

ACCESSION NR: AP3003139 S/0056/63/044/006/2062/2078

AUTHOR: Patashinskiy, A. Z.; Pokrovskiy, V. L.; Khalatnikov, I. M.

TITLE: Regge poles in problems concerning a quasi-classical potential well

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 2062-2078

TOPIC TAGS: Regge poles, rectangular spherical potential well, physical and unphysical poles, levels and resonances

ABSTRACT: A method recently proposed by the authors for finding the poles of the scattering phase shift (Regge poles) for the quasi-classical potentials (ZhETF v. 43, 1117, 1962) is used to analyze the simplest problem of Regge poles for the case of rectangular spherically-symetric potential well. In this case the scattering phase-shift can be explicitly expressed in terms of Bessel functions. In looking for the Regge poles, the previously developed method is used to follow the properties of the phase shift along level lines. Two series of poles are found, "physical" and "unphysical." The character of the motion of the poles with variation of the energy is then clarified and finally some general relations are established between the number of levels and

1/2

L 13565-63
ACCESSION NR: AP3003139

the number of resonances. Although the simplest potential well was chosen in order not to complicate the calculations, the results remain valid essentially for potentials that have singularities outside the point r = 0. Original article has 5 figures and 97 formulas.

ASSOCIATION: Institut fizicheskikh problem Akademii nauk SSSR; Institut teplofiziki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Physics problems, Acad. Sci. SSSR; Institute of Thermophysics, Siberian Department, Acad. Sci. SSSR)

SUBMITTED: 17Jan63 DATE ACQ: 23Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 005

2/2

ACCESSION NR: AP4012553 S/0056/64/046/001/0262/0269

AUTHORS: Baty*yev, E. G.; Pokrovskiy, V. L.

TITLE: Interaction between electrons and lattice vibrations in a normal metal

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 262-269

TOPIC TAGS: metal, electron phonon interaction, Froelich model, electron electron interaction, lattice vibrations, phonon spectrum, electron spectrum, electron ion attraction, quantization of ion oscillations, electron phonon interaction

ABSTRACT: In view of the many simplifying assumptions in the Froehlich model customarily used to take into account electron-phonon interactions in metals (Phys. Rev. 79, 845, 1950), a new model is proposed in which the metal is regarded as a homogeneous isotropic system of electrons and ions. A Coulomb electron-electron interac-

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ACCESSION NR: AP4012553

tion is assumed. The remaining interactions have a Coulomb behavior at large distances but are described at short range by corresponding form factors. The ion system is represented by a fluid. Small oscillations of the ion fluid are quantized. The new model differs from the Froehlich model in the absence of a "bare" sound velocity, which the authors claim to have no physical meaning. This results from a more consistent manner of taking the interaction between particles into account. Expressions are obtained for the phonon and electron spectra by using the corresponding Green's functions and a diagram technique. The effect of the electron-phonon interaction on the spectrum of the electrons remains the same as in the Froehlich model. It is shown that in the case when the electron-ion attraction is sufficiently strong at short range, the system becomes unstable with respect to the production of long-wave phonons. Orig. art. has: 44 formulas and 5 figures.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR (Institute of Radiophysics and Electronics, Siberian Department, AN SSSR

ACCESSION NR: AP4025932 S/0056/64/046/003/0994/1016

AUTHORS: Patashinskiy, A. Z.; Pokrovskiy, V. L.

TITLE: Second order phase transition in a Bose liquid

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 46, no. 3, 1964, 994-1016

TOPIC TAGS: liquid helium, Bose liquid, second order phase transition, two particle interaction, many particle interaction, transition temperature, Green's function technique, diagram technique, quasiparticle spectrum, fluctuation spectrum, specific heat

ABSTRACT: A theory is proposed for second-order phase transitions in liquid helium. It is shown that not only two-particle but many-particle interactions become important, so that the only smallness parameter introduced in the theory is the relative absolute deviation from the transition temperature $|T - T_0|/T_0$. The calculations

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ACCESSION NR: AP4025932

employ Green's-function and diagram techniques. The chief quantities studied are the Green's function, which determines the fluctuation spectrum, and the total vertex part of the diagram, which describes the two-particle scattering. The liquid helium near the phase transition curve is assumed to be an ideal gas of quasiparticle with a spectrum $\varepsilon = Ap^{3/2}$, and physical arguments are advanced in favor of this assumption. The theory shows that the width of the phase transition region depends on the interaction potential between the particles, but the fluctuation spectrum and the particle scattering amplitude are the same for any positive potential, and are independent of the details of the interaction at small distances. At small momenta the effective interaction is determined by a dimensionless charge, which is defined uniquely by the consistency conditions for the theory, but which cannot be determined accurately because the equations are too complicated. Some arguments are advanced to prove that the mathematical scheme proposed is the only possible one. The main theoretical conclusions of the theory are:

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ACCESSION NR: AP4025932

(1) the specific heat has a logarithmic behavior on both sides of the equilibrium curve; (2) the coefficients preceding the term $\ln(|T - T_0|/T_0)$ are the same on both sides of the λ curve; (3) the specific heat experiences a finite jump which is superimposed on the logarithmic curve. All the results have been confirmed experimentally. The problem of second-order phase transitions and its present status are discussed. "We thank A. A. Vedenov for numerous discussions contributing to the clarification of the physical aspects of the problem, A. I. Larkin, V. V. Sudakov, D. V. Shirkov, G. M. Eliashberg, and other participants of the second Odessa Symposium on Theoretical Physics for fruitful discussion, and E. G. Baty*yev, S. K. Savviny*kh, and G. I. Surdutovich for useful remarks which helped eliminate some errors. The authors point to the role played by Yu. B. Rumer whose undiminishing enthusiasm has supported research in this field for many years." Orig. art. has: 1 figure and 108 formulas.

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ACCESSION NR: AP4025932

ASSOCIATION: Institut teplofiziki Sibirskogo otdeleniya AN SSSR (Institute of Heat Physics, Siberian Department, Academy of Sciences USSR); Institut radiofiziki i elektronikia Sibirskogo otdeleniya AN SSSR (Institute of Radiophysics and Electronics, Siberian Department AN SSSR)

SUBMITTED: 14Aug63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: PH NR REF SOV: 006 OTHER: 004

Card 4/4

ACCESSION NR: AP4042573 S/0056/64/046/006/2093/2101

AUTHORS: Baty*yev, E. G.; Patashinskiy, A. Z.; Pokrovskiy, V. L.

TITLE: Phase transition in a superconductor

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2093-2101

TOPIC TAGS: superconductivity, pair theory, boson, Fermi liquid, phase transition

ABSTRACT: It is pointed out that the model of a Hamiltonian in which only the interaction of particles having opposite momenta is taken into account is inadequate for the development of the theory of the phase transition in a superconductor, since it includes the interaction of large-dimension fluctuations. In order to provide a more realistic model, the authors consider a Fermi liquid, the transition temperature T_0 of which is small compared with the degeneracy tem-

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perature μ (or with the Debye temperature in the case of a metal). It is shown that the phase transition picture is the same as for a Bose liquid, in which Cooper pairs play the role of Bose particles. Only temperatures $T \geq T_0$ are considered. It is shown that the region of logarithmic phase transition in a superconductor is very small, $(T - T_0)/T_0 \sim (T_0/\mu)^4$, owing to the weakness of the pair interaction resulting from the small density and small effective mass. Such a narrow temperature interval is too small for experimental purposes. It follows from the results that the thermodynamics of the superconductors as given the Bardeen, Cooper, and Schrieffer model is valid down to the interval of the logarithmic phase transition. Orig. art. has: 48 formulas.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Radiophysics and Electronics, Siberian Department, Academy of Sciences SSSR)

ACCESSION NR: AP4042573

SUBMITTED: 11Dec63 DATE ACQ: ENCL: 00

SUB CODE: GP, NP NR REF SOV: 006 OTHER: 002

Card 3/3

BATYYEV, E.G.; [illegible]

Phase transition in superconductors. Zhur.eksp.i teor.fiz. 47 no.6:2093-2101 Je '64.

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR. (MIRA 17:10)

BATYYEV, E.G.; PATASHINSKIY, A.Z.; POKROVSKIY, V.L.

Behavior of thermodynamic quantities near the η-curve. Zhur. eksp. i teor. fiz. 47 no.2:498-500 Ag '64. (MIRA 17:10)

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR.

L 44715-66 EWT(1) IJP(c) AT

ACC NR: AP6031586 SOURCE CODE: UR/0386/66/004/004/0140/0144

32
B

AUTHOR: Pokrovskiy, V. L.

ORG: Institute of Theoretical Physics, Academy of Sciences SSSR (Institut teoreticheskoy fiziki Akademii nauk SSSR)

TITLE: Distribution function of distances between energy levels of an electron in a one-dimensional random chain

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 4, 1966, 140-144

TOPIC TAGS: electron energy level, distribution function, random processes, statistic distribution, Schrodinger equation

ABSTRACT: The purpose of the investigation was to find, starting from the general principles of dynamics and probability theory, arguments in favor of F. J. Dyson's distributions (J. Math. Phys. v. 3, 140, 157, 166, 1962) of at least the same type as already exist for the Gibbs distribution, for the level spacing in random systems, and to ascertain which ensembles describe energy level distribution for incompletely random systems. To this end, the author analyzes the simplest one-dimensional model for which it is possible to obtain an explicit solution of the problem of the distribution of energy-level spacing. The obtained distribution (very narrow Gaussian peaks)peaks) has no similarity to the Dyson distribution, but since this is the only known example where the problem is solved exactly, its results are also of interest

Card 1/2

Card 2/2

L 10397-67 EWT(1) IJP(c) AT

ACC NR: AP7003127 SOURCE CODE: UR/0056/66/051/002/0449/0461

AUTHOR: Zaslavskiy, G. M.; Pokrovskiy, V. L.

ORG: Novosibirsk State University (Novosibirskiy gosudarstvennyy universitet)

TITLE: Electron energy spectrum in a one-dimensional fluid model

SOURCE: zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 2, 1966, 449-461

TOPIC TAGS: electron spectrum, electron energy

ABSTRACT: The energy spectrum of an electron in a one-dimensional, completely disordered system is studied. The lattice modes are approximated by δ-like potential barriers. The distance between the nodes is a random function. The probability density of the internodal distance is assumed to be an exponentially decreasing function as the distance increases. A method is developed for obtaining an asymptocally exact expression for the density of the energy spectrum near the edge of the energy band. The method developed in the paper is used in an appendix to show how the spectrum of an electron in a field can be found directly. The authors thank A. Z. Patashinskiy for valuable discussions. Orig. art. has: 5 formulas. [JPRS: 39,008]

SUB CODE: 20 / SUBM DATE: 18Jan66 / ORIG REF: 002 / OTH REF: 008

Card 1/1

L 52953-65 EWT(m)/EPF(c)/EPF(n)-2/EWP(t)/EWP(b)/EWA(h) Pr-4/Pu-4 IJP(c)
JD

ACCESSION NR: AP5010505 UR/0056/65/048/004/1097/1110

27
26
B

AUTHOR: Pokrovskiy, V. L.; Surdutovich, G. I.

TITLE: Scattering of slow neutrons in He near the Lambda curve

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 4, 1965, 1097-1110

TOPIC TAGS: helium, slow neutron, neutron scattering, scattering cross section, Lambda point, second order phase transition, fluctuation

ABSTRACT: To clarify the connection between the thermodynamic quantities involved in phase transitions and the scattering of neutrons by the related density fluctuations, the authors use a previously developed theory of phase transitions (A. Z. Patashinskiy and V. L. Pokrovskiy, ZhETF v. 46, 994, 1964) to determine the cross section for the scattering of slow neutrons in helium near the λ-curve. Connections between the neutron scattering cross section and the fluctuation spectrum and between the neutron scattering cross section and the compressibility are also established. The form obtained for the fluctuation spectrum is $\epsilon = Aq^{3/2}$ (ϵ = energy, q = momentum, A a constant which can be determined from experimental data)

Card 1/2

L 52953-65

ACCESSION NR: AP5010505

lends itself to an experimental verification by sensitive measurements. "We thank V. N. Gal'tskiy for a discussion." Orig. art. has: 4 figures and 63 formulas.

ASSOCIATION: Institut fiziki poluprovodnikov, Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Semiconductor Physics, Siberian Department, Academy of Sciences SSSR)

SUBMITTED: 15Aug64 ENCL: 00 SUB CODE: NP

NR REF SOV: 005 OTHER: 004

Card 2/2

DYKHNE, A.M.; POKROVSKIY, V.L.

Adiabatic approximation in quantum and classical mechanics.
Izv. Sib. otd. AN SSSR no.10:38-50 '62 (MIRA 17:8)

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

ACCESSION NR: AP4043636 S/0056/64/047/002/0598/0600

AUTHORS: Baty*yev, E. G.; Patashinskiy, A. Z.; Pokrovskiy, V. L.

TITLE: Behavior of thermodynamic quantities near the Lambda point

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 598-600

TOPIC TAGS: helium, specific heat, chemical potential, lambda transition

ABSTRACT: In view of the lack of agreement between the results of earlier investigations, the authors construct a semi-phenomenological theory of the λ transition in helium, which agrees with the experimental data. This theory is based on two facts: 1) The specific heat has a logarithmic behavior near the λ curve. 2) The dimensionless quantity $(\delta\mu/\delta T)_\lambda$ (where μ -- chemical potential) has a large value. This is equivalent to assuming that the λ curve has a large slope in the (μ, T) plane and that C_p has a logarithmic singularity

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ACCESSION NR: AP4043636

on the entire λ curve. The assumption that $(\delta\mu/\delta T)_\lambda$ is large signifies that perturbation theory becomes inapplicable at rather small values of the coupling constant. It is shown that the theory can be verified quantitatively at the λ point. Orig. art. has: 11 formulas.

ASSOCIATION: Institut radiofiziki i elektroniki Siberskogo otdeneniya Akademii nauk SSSR (Institute of Radiophysics and Electronics, Siberian Department, Academy of Sciences SSSR)

SUBMITTED: 19Feb64 ENCL: 00

SUB CODE: TD, GP NR REF SOV: 000 OTHER: 005

Card 2/2

PATASHINSKIY, A. Z.; POKROVSKIY, V. L.

Second-order phase transition in a Bose fluid. Zhur. eksp. i teor. fiz. 46 no. 3:994-1016 Mr '64. (MIRA 17:5)

BATYYEV, E.G.; POKROVSKIY, V.L.

Electron interaction with lattice osillations in a normal metal. Zhur. eksper. i teor. fiz. 46 no.1:262-269 Ja'64. (MIRA 17:2)

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR.

PATASHINSKIY, A.Z.; POKROVSKIY, V.L.; KHALATNIKOV, I.M.

Studying of an S-matrix in a complex space of angular momenta in the quasi-classical case. Zhur. eksp. i teor. fiz. 45 no.3:760-771 S '63. (MIRA 16:10)

1. Institut teplofiziki Sibirskogo otdeleniya AN SSSR, Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR i Institut fizicheskikh problem AN SSSR.
(Matrices) (Quantum theory)

PATATINSKIY, A.Z.; POKROVSKIY, V.L.; KHALATNIKOV, I.M.

Quasi-classical scattering in a centrally symmetric field.
Zhur. eksp. i teor. fiz. 45 no.4:989-1002 O '63. (MIRA 16:11)

1. Institut fizicheskikh problem AN SSSR.

POKROVSKIY, V. L.

A. Z. Patashinskiy and V. L. Pokrovskiy, "Phase Transitions of the Second Kind in Bose-Liquids."

report submitted for the Conference on Solid State Theory, held in Moscow, December 2-12, 1963, sponsored by the Soviet Academy of Sciences.

PATASHINSKIY, A.Z.; POKROVSKIY, V.L.; KHALATNIKOV, I.M.

Regge poles in problems involving a quasi-classical potential well. Zhur. eksp. i teor. fiz. 44 no.6:2062-2078 Je '63. (MIRA 16:6)

1. Institut fizicheskikh problem AN SSSR i Institut teplofiziki Sibirskogo otdeleniya AN SSSR.

(Potential, Theory of)

POKROVSKIY, V.L.; SAVINNYKH, S.K.

Sound absorption in superconducting alloys. Zhur. eksp. i teor. fiz. 43 no.2:564-572 Ag '62. (MIRA 16:6)

1. Institut radiofiziki i elektroniki Sibirskogo otdeleniya AN SSSR.
(Absorption of sound) (Superconductivity)

POKROVSKIY, V.L., inzh. [deceased]

Use of synthetic foam substances as heat insulating material. Khol.tekh. 39 no.6:69-70 N-D '62. (MIRA 15:12)
(Insulation (Heat))
(Plastic foams)

POKROVSKIY, V.L., inzh. [deceased]

Cold storage warehouse for frozen fish (from "Kaelte Technik," no.7, 1961). Khol.tekh. 39 no.2:69-70 Mr-Ap '62. (MIRA 15:4)
(Germany, West--Cold storage warehouses) (Fish, Frozen)

POKROVSKIY, V. M. and KONSTANTINOV, N. N.

"A Study of Light Product Loses by Evaporation from Storage Tanks", p 233, in the Monograph "Investigation and Use of Petroleum Products", edited by N. G. Puchkov, Gostoptekhizdat, Moscow-Leningrad, 1950.

POKROVSKIY, V.M.; DIBINSKIY, V.G.; KORNILAYEV, A.N.

Effective use of intrafarm pipelines for subsequent pumping of different petroleum products. Trudy VNII NP no.5:137-147 '56.
(MLRA 9:8)

(Petroleum--Pipelines)

All-Union Sci Res Inst. Petroleum Ind

POKROVSKIY, V.M., BENSMAN, V.M.

Prevention of cardiac fibrillation in hypothermia [with summary in English] Eksper. khir. 1 no.4:15-19 Jl-Ag '56 (MIRA 11:10)

1. Iz kafedry normal'noy fiziologii (zav.- prof. P.M. Starkov) i kafedry gospital'noy khirurgii (zav. - prof. G.N. Lukyanov). Kubanskogo meditsinskogo instituta, Krasnodar.

(VENTRICULAR FIBRILLATION, exper.
induced by hypothermia in dogs & cats, prev. (Rus))

(HYPOTHERMIA, exper.
prev. of ventric fibrillation in dogs & cats (Rus))

STARKOV, P.M.; POKROVSKIY, V.M.

Cortical regulation of micturition in man. Fiziol.zhur. 42 no.10: 887-892 O '56. (MLRA 9:12)

1. Kafedra normal'noy fiziologii i Kafedra gospital'noy khirurgii Kubanskogo meditsinskogo instituta, Krasnodar.

(REFLEX, CONDITIONED,
conditioned regulation of diuresis, observations in bladder ectopy in man (Rus))
(DIURESIS, physiology,
conditioned regulation, observations in bladder ectopy in man (Rus))
(BLADDER, abnormalities,
ectopy, observations on conditioned regulation of diuresis in man in (Rus))

Country : USSR
CATEGORY : Pharmacology, Toxicology. Narcotics V

ABS. JOUR. : RZBiol., No.12 1958, No. 56591

AUTHOR : Starkov, P..., Potrovskiy, V.M.
INST. : Kuban Medical Institute
TITLE : The Mechanism of the Toxic Effect of Nitrous Oxide

ORIG. PUB. : Nauchn. Tr. Kubansk. Med. In-t, 1957, vol.15, no.25, 24-31

ABSTRACT : Rats were placed in a chamber ventilated with a mixture of 40% oxygen and 60% nitrous oxide. The pressure was increased every 6 min by 1, 1.5, 1.75, etc. atmospheres. Above 2 atmospheres the pressure was raised only in increments of 0.1 atmosphere. The original frequency of respiration was 56-96/min. Upon raising the pressure of N_2O by 1-1.75 atmosphere, respirations increased, but with further elevation they decreased and their amplitude was diminished. At excessive pressures of nitrous oxide (1470-2800 mm. Hg), respirations ceased. With increased pressure, the heart rate was slowed somewhat; there was

CARD: 1/2

POKROVSKIY, V.M.

USSR/Human and Animal Physiology - Body Temperature Regulation. T-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45838

Author : Pokrovskiy, V.M.

Inst : Kuban' Institute of Medicine.

Title : Organic Survival of Cats after the Azygos Vein and Both Vena Cava were Temporarily Clamped Off in Hypothermia Induced by Physical Chilling.

Orig Pub : Nauchn. tr. Kubansk. med. in-t, 1957, 15 (28), 66-72.

Abstract : Cats were anesthetized by ether and tracheotomized, and then a canulla was inserted into their carotid artery. The animals were subjected to supercooling by being covered with ice. As soon as their body temperature fell to 25-20°C, the animals' thoracic cavity was opened, and the azygos vein and both vena cava were clamped off. After the clamps were removed, the animals were warmed.

Card 1/3

T

Country : USSR
Category= : Human and Animal Physiology, Circulation

Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8058

Author : Bensman V.N., Pokrovskiy V.M.
Institut. : --
Title : Hemodynamic Changes Associated with the Temporary Removal of the Heart from the Circulatory System and Cardiac Surgery under Hypothermic Conditions.

Orig. Pub. : Vestn. khirurgii, 1957, 79, No. 11, 64--72

Abstract : Excluding a dog's heart from the circulation for 15 minutes by closing off the venae cavae and the azygous vein under hypothermic conditions resulted in a fall in arterial pressure, a lessening of the force of cardiac contractions and various disturbances in rhythm up to ventricular fibrillation and cardiac arrest. The disturbances in rhythm were earlier in onset and were more severe if ventriculotomy was performed in addition or, especially, chordotomy and valvulotomy of the tricuspid

Card: 1/2

Country : USSR
Category : Human and Animal Physiology, Circulation

Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8058

Author :
Institut. : Iz gospital'noy khirurgicheskoy kliniki (zav. prof. G. N. Luk(yanov) i kafedry fiziologii (zav. prof. P. M Starkov) Kubanskogo meditsikskogo inst. Adres V. M Bensmana: Krasnodar,
Title :

Orig Pub. :

Abstract : valve. Removal of the clamps from the veins resulted in, depending upon the interference produced, a rapid rise in arterial pressure and sudden tachycardia, a progressive decline in the force of cardiac contractions, partial or complete atrioventricular block, ventricular fibrillation and cardiac arrest. Restoration of cardiac activity was facilitated by gradual adaptation of the heart to the level of venous inflow, rhythmic mechanical stimulation of the heart and intravenous injection of proserine and ephedrine.--L.S.Nakhutin

Card: 2/2

BELIK, A.A.; POKROVSKIY, V.M.

Anticorrosive protection of loading cranes. Zashch.met. 1 no.4:453-455 Jl-Ag '65. (MIRA 18:8)

1. Dnepropetrovskiy otdel tresta "Ukrmontazhorgstroy".

AGANYANTS, Ye.K. (Krasnodar); POKROVSKIY, V.M. (Krasnodar)

Fourteenth Conference of Physiologists of the Southern R.S.F.S.R.
Fiziol.zhur. 48 no.12:1523-1525 D '62. (MIRA 16:2)
(PHYSIOLOGY—CONGRESSES)

POKROVSKIY, V.N.

48-7-15/21

AUTHORS: Gorodinskiy, G.M., Murin, A.N., Pokrovskiy, V.N., Preobrazhenskiy, B.K.

TITLE: On Neutron Deficient Isotopes of Rare Earths which Form as the Result of the Reaction of a "Deep" Separation of Ta under Irradiation by Protons with an Energy of 660 MeV (O neytronodefitsitnykh izotopakh redkikh zemel', obrazuyushchikhsya v rezul'tate reaktsii glubokogo otshchepleniya Ta pri obluchenii protonami energii 660 MeV)

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser. Fiz., 1957, Vol.21, Nr 7, pp. 1004 - 1012 (USSR)

ABSTRACT: The rare earths were chosen for the study, since the neutron deficient isotopes of the lanthanides which form in the reaction are little investigated and sometimes also unknown. A tantalum target was irradiated by a synchronous cyclotron from the Unite Institutes for Nuclear Research. The separation of the rare earths was carried out chromatographically. The study of individual fractions was principally performed by the scintillati method by means of a γ - spectrometer and γ - γ-coincider The scintillation-γ-spectrometer constructed by the authors

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On Neutron Deficient Isotopes of Rare Earths which Form as the Result of the Reaction of a "Deep" Separation of Ta under Irradiation by Protons with an Energy of 660 MeV

fully explained. The use of a lead collimator with an aperture in the form of a truncated cone proved to be best for determining the relative intensities of γ-lines. In order to remove the X-ray fluorescence of lead, tantalum-tin and copper foil were glued inside the cone. Then the investigation of the line forms is described and formulae are given for the calculation of the efficiency coefficient of the γ-quantum number and of others. By means of these formulae those were calculated for quite a number of X-ray and γ-quantum energies. The resulting data are represented on figure 1. A detailed interpretation of the measurement results is given namely for the isotopes Lu, Yb and Tu with the mass numbers from 173 to 165. Figure 2 shows the γ-spectrum of Lu^{173} and figure 3 shows the decay scheme for Lu^{173}. Figure 4 represents the γ-spectrum of Tu^{167} in the section of small energy. Figure 5 records the decay scheme of Tu^{167} and figure 6 the probable decay scheme of Tu^{166}. There are 6 figures and 15 references, 6 of which are Slavic.

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On Neutron Deficient Isotopes of Rare Earths which Form as the Result of the Reaction of a "Deep" Separation of Ta under Irradiation by Protons with an Energy of 660 MeV

ASSOCIATION: Radium Institute im. V.G. Khlopin, AN USSR
(Radiyevyy institut imeni V.G. Khlopina Akademii Nauk SSSR)

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Pokrovskiy, V. N.

48-12-11/15

AUTHORS: Gorodinskiy, G. M. , Murin, A. N. , Pokrovskiy, V. N. , Preobrazhenskiy, B. K.

TITLE: On Isotopes of Rare Earths With a Deficiency of Neutrons That Form in Deep Splitting (Spallation) of Ta by Protons With an Energy of 660 MeV. Information II(O neytronno defitsitnykh izotopakh redkikh zemel', obrazuyushchikhsya v rezul 'tate reaktsii glubokogo rasshchepleniya Ta protonami energii 660 MeV. Soobshcheniye II)

PERIODICAL: Izvestiya AN SSSR, Seriya Fizicheskaya, 1957, Vol. 21, Nr 12, pp. 1624 - 1632 (USSR)

ABSTRACT: Elements of the group of rare earths were separated from a tantalum-target. The latter was on a synchrocyclotron irradiated by rapid protons with 660 MeV and chromatographically separated. The results for the isotopes A from 160 to 134 are given here. A = 160. The observed isotopes Er and Ho with the mass number 160 form a genetic chain. The Er^{160}-decay is according to reference 2 not accomplished by a γ-quantum-emission. This was again confirmed here. Thus the Er^{160}-decay immediately passes to the original and isomeric level of Ho^{160}. The existence of the isomer $Ho^{160\ m}$ ($T_{1/2}$ = 5 hours) was definitly determined in reference 3. Experiments were made for determining the relative probability of the transi-

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On Isotopes of Rare Earths With a Deficiency of Neutrons That Form in Deep Splitting (Spallation) of Ta by Protons With an Energy of 660 MeV. Information II.

tions to the isomeric and original(ground-) level of Ho^{160}. The results are given here. A = 159: Among others the long-lived isotope Dy^{159} ($T_{1/2}$ = 134 days) which does not emit any γ-rays was separated. A = 157: In the fraction Dy (which was purified of Y) an activity which declined with T = 8,5 hours was determined. A = 156: A presence of Tb^{156} in the fraction Tb is possible. A = 155: The line 227 keV was very distinctly determined in the γ-spectrum of the fraction Dy. The intensity of this line decreased with $T_{1/2}$ = 10 hours. Besides it was determined that Tb with a half-decay period of about 5 days develops in the decay of the isotope Dy with $T_{1/2}$ = 10 hours. It is assumed that if Tb^{156} were present among the products of separation of Ta, its γ-spectrum would closely coincide with the γ-spectrum of Tb^{155}. A = 154: The presence of the isotope Tb^{154} in the fraction is possible. A = 153: Among the Dy-isotopes is Dy^{153} which possesses a half-decay period of 10 hours without emitting γ-quanta. A = 151: An activity with $T_{1/2}$ = 20 hours was determined in the Tb-fraction. A long-lived isotope Gd^{151} with $T_{1/2}$ = 150 days is present in the Gd-fraction and probably among the daughter-elements of Tb. A = 149: The spectrum of Gd^{149} contains the lines 150, 300, 347 and 520 (probably a double-

On Isotopes of Rare Earths With a Deficiency of Neutrons That Form in Deep Splitting (Spallation) of Ta by Protons With an Energy of 660 MeV. Information II.

-line) keV. A = 147: Activities with $T_{1/2}$ = 1,5 days and 60 days which do not correspond to any known Gd-isotope were determined in the Gd-fraction. Some time after the separation Eu^{147}-lines occurred in the γ-spectrum of the Gd-fraction. Important conclusions on the relative intensity of the lines were drawn. 1.) The presence of the coincidence-peaks of the lines 120 and 200 keV with X-radiation (40 keV) indicates a coincidence of the γ-quanta with the X-rays of Sm^{147}. This is confirmed by the direct tests in the scheme of the γ-γ-coincidences. The lines 120 and 200 keV themselves do not yield any coincidence. 2.) The line 80 keV formally considered as really existing (reference 11) in reality is the peak of the coincidence of X-rays developing during K-capture and conversion. 3.) By evaluation of the intensity of this peak an evaluation of the conversion-coefficients can be obtained. A = 145: The activity with $T_{1/2} \sim$ 60 days was determined in the Gd-fraction and classified with the isotope Gd^{145}. The γ-spectrum of Gd^{145} consists of 115 keV-lines. The lines 640 and 750 keV belong to Eu^{145}. According to precise data the γ-spectrum of Eu^{145} ($T_{1/2} \sim$ $\sim$ 5 days) consists of the lines 636 and 745 with the relative intensities 1,0 and 2,3. A = 140: The activity with $T_{1/2} \sim$ 3,5 days

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On Isotopes of Rare Earths With a Deficiency of Neutrons That Form in Deep Splitting (Spallation) of Ta by Protons With an Energy of 660 MeV. Information II.

discovered in the Nd-fraction was ascribed to Nd^{140} ($T_{1/2}$=3,3 days). The only distinctly visible annihilation-line 510 keV and also positrons with 2,3 MeV were noticed in the γ-spectrum of the Nd-fraction. A = 139: In the γ-spectrum of the Pr-fraction an annihilation-line 510 keV was noticed whose intensity decreased with $T_{1/2} \sim 4$ hours. It was ascribed to the Pr^{139}-decay ($T_{1/2}$=4,2 hours according to reference 5). A = 134: The existence of the genetic chain $Ce^{134} \xrightarrow[52\text{ hours}]{K} La^{134} \xrightarrow[6,5\text{ minutes}]{K,\beta}$ with the characteristics described in reference 5 was confirmed. Finally some observations on non-identified activities are given. In the work participated: V. P. Dzhelepov, V. N. Mekhedov, V. A. Khalkin, B. S. Dzhelepov, N. M. Anton'yeva, A. A. Bashilov, A. V. Kal'yamin, O. M. Lilova. There are 7 figures, and 15 references, 9 of which are Slavic.

ASSOCIATION: Radium Institute im. V. G. Khlopin AS USSR.
(Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR)

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SOV/48-22-7-7/26

AUTHORS: Baranovskiy, V. I., Murin, A. N., Pokrovskiy, V. N., Yutlandov, I. A.

TITLE: Mass Numbers of Tb Isotopes Showing Neutron Deficiency (O massovykh chislakh neytronodefitsitnykh izotopov Tb)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 7, pp. 808-810 (USSR)

ABSTRACT: For a more precise determination of the mass numbers of Tb isotopes present in the fraction, the attempt was made to establish the genetic connections by means of a repeated chromatographic separation of the daughter elements, and by examining these. This method permits to determine both the mass number of the parent isotope (for a known daughter isotope), and its half-life (provided that the quantity of daughter isotope separated will be proportional to $e^{-\lambda t}$ for equal intervals between the separations, λ being the decay coefficient). In this way the Tb isotopes with A = 149, 151, and 153 may be studied if the corresponding radioactive Gd isotopes (Z = 64) are known. Other Tb isotopes, however, in decay transmutate to stable Gd isotopes. With all four separat-

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Mass Numbers of Tb Isotopes Showing Neutron Deficiency

ions carried out from Tb, two isotopes Gd^{153} and Gd^{151} were observed. No other daughter elements were found in noticeable quantities. The isotope Tb^{153} with $T_{1/2}$ = 2,4 days may be regarded as certainly existent. Best visible in the γ-spectrum of Tb^{153} is the group of lines in the range from 205 to 210 keV. The intensity of this γ-line group observed in the Tb fraction spectrum decreased at a rate of $T_{1/2} \sim 2,7$ days. The other Gd^{151} isotope found (daughter isotope) belongs to class B, its half-life $T_{1/2}$ being 120 - 150 days according to the authors' data, the γ-spectrum consisting of the lines 154 and 247 keV. For the parent substance a half-life $T_{1/2}$ = = 18 $\pm$ 2 hours was found. - In view of the genetic connection between Tb^{151} and Gd^{151} which was not observed before, the mass numbers for these isotopes may be considered as more trustworthy than had formerly been assumed. Since the presence of Tb^{154} in the Tb fraction could neither be confirmed nor excluded in these experiments, it cannot be stated with certainty to which of these isotopes (or their mixtures) the 270 and 345 keV γ-lines belong that were observed by the authors. - The fact that Eu is absent among the daughter elements permits us to say that the α-decay component in Tb^{151}

Mass Numbers of Tb Isotopes Showing Neutron Deficiency

does not exceed 1 % (as compared with electron capture). Examination of short-life reaction products of a low Ta splitting made it possible to establish a genetic connection between Tb^{149} and Gd^{149}. If the mass number determined for Tb^{149} is considered as trustworthy, this connection permits to take the A value for Gd^{149} as well. - Acknowledgement is made to B. K. Preobrazhenskiy and V. N. Mel'nikov who were helpful in chromatographic separation, and to N. Bushuyev for his assistance with the measurements. There are 1 figure, 1 table, and 15 references, 6 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin, AS USSR)

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SOV/56-22-7-8/26

AUTHORS: Gerodinskiy, G. M., Murin, A. N., Pokrovskiy, V. N.

TITLE: Mass Numbers of Gadolinium Isotopes With a Half-Life of $T_{1/2}$ = 52 Days and of Europium Isotopes With a Half-Life of $T_{1/2}$=4,3 Days (O znacheniii massovogo chisla izotopov gadoliniya s periodom poluraspada $T_{1/2}$ = 52 dn. i yevropiya s periodom poluraspada $T_{1/2}$ = 4,3 dn.)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 7, pp. 811-814 (USSR)

ABSTRACT: The γ-spectrum of the gadolinium fraction (obtained from a "thorough' (glubokoye) fission reaction) was investigated with a γ-scintillation spectrometer in the scintillation equipment for γ-γ coincidences. A description of the scintillation counter and of the measuring method is given in reference 1. In order to determine the content of Gd ($T_{1/2}$=52 days) in the gadolinium fraction, the energy of the γ-line in the range of 115 keV was carefully measured. It was found that the proportion of gadolinium with a half-life of 52 days (E_γ=115 keV) is much smaller in the preparation than it is in Gd^{153}. The γ-spectrum of Gd with a half life of 52 days consists of two

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Mass Numbers of Gadolinium Isotopes With a Half-Life of $T_{1/2}$ = 52 Days and of Europium Isotopes With a Half-Life of $T_{1/2}$ = 4,3 Days

lines at an energy of the order of 115 keV and of one γ-line at an energy of 150 keV. The quanta of these energies coincide with respect to their moment of emission. Europium apparently possesses two neutron-deficient isotopes with periods close to each other. One of them could be the europium isotope Eu^{145}, which was investigated by Hoff (Khoff) (Ref 5). The mass number of isotopes can be determined by comparing the γ-spectra with γ-spectra of already investigated nuclides. It is attempted to ascribe such mass numbers to the isotopes of the decay chain $Gd \xrightarrow[52\ days]{K} Eu \xrightarrow[4,3\ days]{K} Sm$ as not to contradict the evidence available on isotopes with a neutron deficit. The energy levels of these nuclei well agree with the values which could be expected from an excited state of an odd-odd (Eu^{146}) and an even-even nuclide (Sm^{146}). Hence it may be expected that the energy of the first vibration level will be close to the energy of the corresponding level of $_{60}Nd^{144}_{84}$, as this nuclide also has two nuntrons outside of the closed shell and an even number of protons. This is actually the case. The chain of radioactive transmutations

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Mass Numbers of Gadolinium Isotopes with a Half-Life of $T_{1/2}$ = 52 Days and of Europium Isotopes with a Half-Life of $T_{1/2}$ = 4,3 Days SOV/48-22-7-3/36

is written down in its final order, as it was established:

$$64Gd^{146} \xrightarrow[T_{1/2} = 50 \text{ days}]{\beta} 63Eu^{146} \xrightarrow[T_{1/2} = 4,3 \text{ days}]{\beta} 62Sm^{146}$$

L. A. Poker took part in the discussion of the results. A. V. Kalyamin assisted in the work. There are 4 figures, 1 table, and 6 references, 5 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin AS USSR)

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SOV/48-22-7-9/26

AUTHORS: Dobronravova, A. N., Krizhanskiy, L. M., Murin, A. N., Pokrovskiy, V. N.

TITLE: Mass Numbers of Dysprosium Isotopes With a Neutron Deficit (Massovyye chisla neytronodefitsitnykh izotopov disprozi,a)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 7, pp. 815 - 816 (USSR)

ABSTRACT: When the authors investigated the Dy-fraction and the genetic relations of the Dy-isotopes with their daughter elements (Tb and Gd), they arrived at the conclusion (Ref 4) that isotopes with a mass number of 159, 157, 155, and 153 must be contained in the Dy-fraction. In order to check on this assumption it was attempted to determine directly the masses of the Dy-isotopes, which are produced in a "thorough" (glubok) Ta-fission reaction. For this purpose the Dy-fraction was separated in the mass spectrometer. The β-spectra of the separated Dy-isotopes were recorded with a scintillation spectrometer. A MC-2 industrial-type mass spectrometer was used for the separation. In order to increase the intensity

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Mass Numbers of Dysprosium Isotopes With a Neutron Deficit

of light the slits were somewhat widened and the tungsten filament cathode was platinated. The preparations were investigated on a γ-scintillation spectrometer with a NaJ(Tl)-crystal with a size of 30 x 20 mm. Radioactive isotopes of Dy with a mass number of 159, 157, 155, 153, and probably of 151 were found. The low activity of the Dy^{159}-sample, and the very low one of the Dy^{151}-sample did not permit a further investigation. From the evidence collected the following conclusions could be drawn: Dy^{157}: half-life $T_{1/2}=8,5\pm0,5$ hours. A radioactive daughter substance was not found. The γ-spectrum shows 80- (weak) and 325 keV-lines. Dy^{155}: $T_{1/2}=9\pm2$ hours. A radioactive daughter substance with a half-life of about 5 days (Tb^{155}, Refs 4 and 6) was found. The γ-spectrum of Dy^{155} consists of 80- (dubious) and 227 keV-lines: Dy^{153}. $T_{1/2}$ = = 7 ± 3 hours. A radioactive daughter substance with a half-life of about 2 days (Tb^{153}, Ref 7) was found. The γ-spectrum of

Mass Numbers of Dysprosium Isotopes With a Neutron Deficit

Dy^{153} contains the 80 keV-line. There are 9 references, 6 of which are Soviet.

ASSOCIATION: Radiyevyy institut im. V.G. Khlopina Akademii nauk SSSR. (Radium Institute imeni Khlopin, AS USSR)

SOV/48-22-7-11/26

AUTHORS: Gorodinskiy, G. M., Murin, A. N., Pokrovskiy, V. N., Preobrazhenskiy, B. K.

TITLE: On the Lutetium Isotope With the Mass Number 173 (Ob izotope lyutetsiya s massovym chislom 173)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 7, pp. 818-820 (USSR)

ABSTRACT: A long-lived Lu-isotope with a half-life $T_{1/2}$ of about 200 days was discovered by the authors among the products of the rare earths obtained from a "thorough" (glubok) fission reaction. It was given the mass number 173. (Ref 1). As this half-life does not agree with that of reference 2 for Lu^{173} and as it is near to that of Lu^{174} (165 days) a separation of Lu from Hf was carried out. The lutetium separated from Hf was stored for several months until the short-lived isotopes had decayed almost completely. Then the β-spectra were investigated as well as the γ-spectra of the preparation obtained by a chromatographic separation of the sum of radioactive rare

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earths. When the necessity arose, the Lu preparations were purified from Yb^{169}. A comparison of the spectra shows that the basic proportion of the activity of long-lived Lu is without doubt caused by only one isotope with a half life of about 200 days. The table of isotopes from reference 2 shows that the only isotope remaining in the preparation separated from Hf is Lu. Thus, the earlier identification by the authors was substantiated. γ-lines with an energy of 345, 570 and 630 keV were discovered in the range of hard γ-radiation of the spectrum of Lu^{173}. It is only assumed that the 570 and 630 keV γ-lines originate from the Lu^{173} spectrum. The relative intensities of the γ-lines of Lu^{173} are determined by the following ratio: $\gamma_{79} : \gamma_{101} : \gamma_{175} : \gamma_{274} : \gamma_{345} : \gamma_{570} : \gamma_{630} :$ = 1 : 0,52 : 0,425 : 1,85 : 0,0113 : 0,15 : 0,26. In order to check the coincidence of the γ-quanta of Lu^{173} the coincidences of the γ-quanta with an energy of 274, 175 and 79 keV with the other quanta of the spectrum were examined. The results are

as follows: The γ-line at 79 keV gives a coincidence with the lines at 101, 175, and 274 keV. The γ-line at 175 keV gives a coincidence with the 101 keV-line and with that of the self-coincidence, which substantiates the composite character of this line. A control experiment checking on the coincidence of the 274 keV-line with the other lines confirmed these statements. Based upon a combined evaluation of the results from reference 3 and of this paper a decay scheme of Lu^{173} is suggested. The low activity of the preparation did not permit to determine the position of the 570 and 630 keV transitions. In the computation of the relative coincidence probability of various γ-quanta of Lu^{173} the aforementioned decay scheme and the known parameters of the measuring equipment for γ-γ-coincidences are used. The results of the computation and of the experiment well agree with each other. The staff of the Laboratory for Nuclear Problems OIYaI assisted in the work. K. Ya. Gromov and B. S. Dzhelepov discussed the results of the investigation with the authors. There are 4 figures and 3 references, 3 of which are Soviet.

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On the Lutetium Isotope With the Mass Number 173

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR
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POKROVSKIY, V. N.

21(0) PHASE I BOOK EXPLOITATION SOV/2081

International Conference on the Peaceful Uses of Atomic Energy, 2d., Geneva, 1958

Doklady sovetskikh uchenykh; yadernaya fizika (Reports of Soviet Scientists; Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Its: Trudy, Vol. 1) 8,000 copies printed.

Eds. (Title page): A.I. Alikhanov, Academician; V.I. Veksler, Academician; and N.A. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this volume: S.I. Brezdov and B.F. Zaretskiy, Candidates of Physical and Mathematical Sciences; Ed. (Inside book): G.L. Smelyan; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 43 papers presented by Soviet Scientists at the Second Conference on Peaceful Uses of Atomic Energy, held in Geneva in September 1958.

COVERAGE: It is divided into two parts. Part I contains 17 papers dealing with plasma physics and controlled thermonuclear Reactions, and Part II contains 26 papers on nuclear physics, including problems of particle acceleration and of cosmic ray physics. The first paper by L.A. Artsimovich presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field.

Papers in Part II deal in detail with various problems in nuclear physics, such as the fission of heavy atoms and their isotopes, and with the study of cosmic radiation by means of artificial earth satellites and rockets, described in a paper by S.N. Vernov. The Russian-language edition of the proceedings of the conference is published in 16 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), Yadernaya fizika (Nuclear Physics); Volume (2), Yadernyye reaktory i yadernaya energetika (Nuclear Reactor and Nuclear Power); Volume (3), Yadernoye goryucheye i metally (Nuclear Fuel and Reactor Metals), Volume (4), Khimiya radioelementov i radiatsionnykh prevrashcheniy (Chemistry of Radioelements and of Radiation Transformations); Volume 5, Radiobiologiya i radiatsionnaya meditsina (Radiobiology and Radiation Medicine); Volume (6) Polucheniye i primeneniye izotopov (Production and Use of Isotopes). The other 10 volumes contain selected papers presented at the Conference by non-Soviet scientists. In the present volume discrepancies between the English and Russian language edition of the proceedings have been noted in three articles where the texts are not identical; viz; Andrianov, et al, "High Current Pulsed Discharge"; Akhiyezer, et al, "High Frequency Plasma Oscillation"; and Bogolyubov, "Investigations of the Many-body Problem". The serial numbers of reports 2302 and 2504 are reversed in the English edition. Report 2211, by Sinelnikov, et al, is numbered 2536 in the English edition.

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21 (7), 21 (8)

SOV/89-7-1-16/26

AUTHOR: Rudakov, V. P.

TITLE: IX All-Union Conference on Nuclear Spectroscopy (IX Vsesoyuznoye soveshchaniye po yadernoy spektroskopii)

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 1, pp 76-79 (USSR)

ABSTRACT: The IX All-Union Conference was held from January 26 to February 2, 1959 at Khar'kov. More than 300 participants heard 100 lectures, the most important of which dealt with the following fields: Nuclear Theory. General problems of β-decay. A. S. Davydov (MGU): Theoretical classification of low-energy excited nuclear states. L. K. Peker: Deformed nuclei. R. L. Birbrair, L. K. Peker, L. A. Sliv (LFTI): Quadrupole oscillations of deformed nuclei. Ye. V. Inopin, V. Yu. Gonchar, S. P. Tsytko (KhFTI): Calculation of the ft-values with matrix elements for β-transitions by means of the generalized nuclear model. S. T. Belyayev (IAE): Consideration of pair-correlation in nuclei. A. B. Migdal (IAE): The application of the superconductivity model to nuclei for the purpose of calculating their moments of inertia. P. E. Nemirovskiy (IAE): Problems of the neutron stability of nuclei. Ya. A. Smorodinskiy (IAE): The present stage in the theory of β-decay. V. V. Vladimirskiy,

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V. K. Grigor'yev, V. A. Yergakov, Yu. V. Trebukhovskiy (ITEF): Measurement of the angular correlation between electron and neutrino in the decay of the neutron. V. M. Lobashev, V. A. Nazarenko, L. I. Rusinov (LFTI): Measurement of the correlation between the transversal electron polarization and circular polarization of γ-quanta occurring in the decay of Sc^{46} and Co^{60}. Decay Schemes. γ-radiation of Nuclei. Yu. P. Antufriyev, A. K. Val'ter, Yu. V. Gonchar, Ye. G. Kopanyets, A. N. L'vov, P. M. Tutakin, S. P. Tsytko, P. V. Sorokin, A. S. Deyneko, I. Ya. Malakhov, A. Ya. Taranov (Fiziko-tekhnicheskiy Khar'kovskiy institut (Physico-technical Institute, Khar'kov)): The $Si^{28,29,30}(p,\gamma)$, $Ne^{20}(p,\gamma)$, $S^{32,34}(p,\gamma)$, $Ar^{40}(p,\gamma)$ and $N^{14}(p,\gamma)$ reactions. D. G. Alkhazov, A. P. Grinberg, G. M. Gusinskiy, M. Kh. Lemberg, V. V. Rozhdestvenskiy, I. N. Erokhina of the Leningradskiy fiziko-tekhnicheskiy institut (Leningrad Physicotechnical Institute): Investigation of the Coulomb excitation of the lower levels of some nuclei during their bombardment by multiply charged ions (C, N, O, and Ne). A. Ya. Kalyamin, A. N. Murin, V. N. Pokrovskiy, V. A. Yakovlev (RIAN): New isotopes Tu^{161}, Ho^{153}, Ho^{155} and Ho^{157}. B. S. Dzhelepov, V. A. Sergiyenko (LGU): Decay schemes of some neutron-deficient isotopes, set up on the basis of measurements of the coincidence of the internal conversion electrons. Spectroscopy Engineering. B. S. Dzhelepov, N. B. Ivanov, V. G. Nedovesov, V. G. Chumin (RIAN): α-spectrometer with double focusing. S. A. Baranov, V. V. Baranov, A. G. Zelenkov, A. F. Malov, V. Ya. Shchepkin (IAE): Improved α-spectrometer. L. F. Barchuk, G. V. Belykh, V. I. Gol'yshkin, V. A. Kravtsun (IFAN UkrSSR): Magnetic spectrograph for heavy charged particles. The representatives of the Ministerstvo radiotekhnicheskoy promyshlennosti (Ministry of the Radio-engineering Industry) gave a report about new multipliers. The Conference was closed by B. S. Dzhelepov, who stressed the fact that nuclear tables and reference works ought to be published much more quickly in order to be of real use to the experimenter.

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24(5),24(7)
AUTHORS: Baranovskiy, V. I., Pokrovskiy, V. N. SOV/48-23-7-5/31

TITLE: γ-Spectrum of Tu^{166} and Yb^{166} (γ-spektr Tu^{166} i Yb^{166})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 819-820 (USSR)

ABSTRACT: The authors investigated (Ref 1) the chains $Yb^{166} \rightarrow Tu^{166} \rightarrow Er^{166}$ of the rare earth products of the deep disintegration of Ta, measuring the γ-spectrum of the mixture $Yb^{166} + Tu^{166}$ and of pure Tu^{166}. As the energy of the γ-lines and their relative intensity are practically in agreement at $E_\gamma > 100$ kev, it can be concluded that Yb^{166} has no lines in the range investigated. From the relative intensity of the 80 kev γ-lines, however, it can be concluded that Yb^{166} has 80 kev γ-lines. Accurate measurements were carried out in this range, and it became clear that in the fraction Yb also Yb^{169} is present besides Yb^{166}. The data obtained for the γ-spectrum of Tu^{166} agree with the data of the spectrum of the conversion electrons of Tu^{166} (see the preceding paper in this issue). The authors

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thank A. N. Murin for his steady interest in the work, as well as B. K. Preobrazhenskiy and A. V. Kalyamin for the execution of the chromatographic separation. There are 6 references, 2 of which are Soviet.

ASSOCIATION: Radiyevyy institut imeni V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR). Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

24(5),21(7)
AUTHORS: Gromov, K. Ya., Dzhelepov, B. S., Pokrovskiy, V. N. SOV/48-23-7-6/31

TITLE: On the Scheme of the Decay of Tu^{166} (O skheme raspada Tu^{166})

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 7, pp 821-825 (USSR)

ABSTRACT: The first part of the present paper deals with the multipole transitions in Er^{166}, and discusses at first the experimental data of the emission accompanying the decay of Tu^{166}, which were obtained in the preceding papers of this issue. The identification of the energy of the α-transitions, and the relative intensity of the K-conversion electrons, are considered. The multipole transitions E1, E2, (M1 + E2), and M2 are then investigated, and the results are compiled in table 1. The second part investigates the absolute intensity of the γ- and conversion-lines, and calculates the number of captures of orbital electrons. The third part deals with two rotational bands of Er^{166}, the authors referring to previous papers. At first, the levels of the rotational band of the ground state, then the levels of the second rotational band, are investigated

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and explained with the help of a figure. The theory developed by A. S. Davydov on the rotational states of non-axial nuclei is mentioned which permits the energy of the rotational levels to be calculated. The intensity of the transitions in the bands studied here is then investigated, and the results are compiled in table 1. The fourth part investigates some other levels of the excitation of Er^{166}, and it is ascertained that for a clarification of these excited states of Er^{166} and their quantum characteristic, accurate measurements of the energy of the conversion electrons will have to be carried out. There are 1 figure, 3 tables, and 7 references, 5 of which are Soviet.

ASSOCIATION: Radiyevyy institut imeni V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR). Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

POKROVSKIY, V. N., CAND PHYS-MATH SCI, "STUDY OF CERTAIN NEUTRON-DEFICIENT ISOTOPES OF YTTERBIUM, THULIUM, ERBIUM, HOLMIUM, DYSPROSIUM, AND TERBIUM." [LENINGRAD], 1960. (LENINGRAD ORDER OF LENIN STATE UNIV IM A. A. ZHDANOV). (KL, 3-61, 205).

24.6720

78324
SOV/89-8-3-9/32

AUTHORS: Dalkhsuren, B., Levenberg, I. Yu., Norseyev, Yu. V., Pokrovskiy, V. N., Khaynatskiy, S. S.

TITLE: The Neutron-Deficient Isotope Ho^{155}. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 3, p 248 (USSR)

ABSTRACT: Mihelich, Ward, and others (see ref) assumed the existence of a short-level isotope Ho^{155} as a parent nucleus needed to explain the formation of isotopes of Dy^{155} and Tb^{155}. The authors investigated on a scintillation γ-spectrometer the γ-spectrum of a holmium fraction obtained as a result of deep splitting of tantalum during exposure to 660-mev protons of the synchrocyclotron at the Joint Institute of Nuclear Research (Ob'yedinennyy institut yadernykh issledovaniy). They also performed multiple chromatographic separation of the daughter element dysprosium. A triple separation

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in 1-hr intervals showed in all three cases the presence of only Dy^{155} isotope identified from its γ-spectrum and half-life. Mass number of Dy^{155} was fixed by means of a mass spectrometer. The amount of Dy^{155}

in consecutive separation was proportional to the activity of the parent material (Ho^{155}) and varied according to a half-life of approximately 46 min. The authors, therefore, claim that they positively established the existence of the Ho^{155} isotope with a half-life of 46 ± 3 min. The γ-spectrum of this isotope probably contains the line $\sim$140 kev. Mihelich and others earlier attributed the $\sim$138 kev γ-line with a half-life of approximately 1 hr to Ho^{156}, although they noted that the mass determination was not sufficiently substantiated. There are 5 references, 2 Soviet, 1 U.K., 2 U.S. The U.K. and U.S. references are: J. Mihelich, B. Harmatz, T. Handley, Phys. Rev., 108, 989 (1957); T. Ward, K. Yacob, J. Mihelich, B. Harmatz, T. Handley, Bull.

ZAYTSEVA, N.G.; KUZNETSOVA, M.Ya.; LEVENBERG, I.Yu.; POKROVSKIY, V.N.; KHALKIN, V.A.

Existence of isomers of Te^{119}. Izv.AN SSSR.Ser.fiz. 24 no.9: 1083-1085 S '60. (MIRA 13:9)
(Tellurium)

KUZNETSOVA, M.Ya.; POKROVSKIY, V.N.; RYBAKOV, V.N.

[Study of the reaction $Al^{27}(p,p\pi^+)Mg^{27}$] Izluchenie reaktsii $Al^{27}(p,p^{\pi}+)Mg^{27}$. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1962. 10 p. (MIRA 15:2)
(Nuclear reactions)

38853

94.1600 (2806)

S/056/62/042/006/004/047
B104/B102

AUTHORS: Kuznetsova, M. Ya., Pokrovskiy, V. N., Rybakov, V. N.

TITLE: Study of the $Al^{27}(p,p\pi^+)Mg^{27}$ reaction

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 6, 1962, 1451 - 1455

TEXT: The excitation function of the $Al^{27}(p,p\pi^+)Mg^{27}$ reaction at proton energies between 130 and 660 Mev is investigated. The purity of the Al specimen justifies neglecting the production of Mg^{27} by disintegration of isotopes of heavy impurities. Three specimens (7·12 mm^2; 0.4 mm thick) were so mounted in the synchrocyclotron of the OIYaI that the internal proton beam penetrated the successive specimens parallel to their 7 mm side. The reaction threshold is ~200 Mev. Therefore, the pions are produced by collisions of the incident protons with single nucleons of the nuclei. The shift of this threshold with respect to the threshold of free nucleon-nucleon collisions is explained by the innernuclear motion of the nucleons. At $E_p \sim 500$ Mev the excitation function becomes constant. The

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GORODINSKIY, G.M.; POKROVSKIY, V.N.; FIRSOV, Ye.I.

Neutron-deficient Gd and Eu isotopes with mass numbers 145 and 147.
Uch zap. Ped inst Gerts. 197:176-179 '58. (MIRA 16:9)
(Gadolinium isotopes--Spectra)
(Europium isotopes--Spectra)

POKROVSKIY, V.N.

Mechanism of the mutagenic action of 5-bromouracil. Report No.1: Replacement of thymine by 5-bromouracil in the DNA of Salmonella typhimurium No. 70 and the mutagenic effect of the analogue. Zhur. mikrobiol., epid. i immun. 41 no.1:92-95 Ja '64.

(MIRA 18:2)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR, Moskva.

POKROVSKIY, V.N.

Mutagenic action of 5-bromuracil on Salmonella typhimurium under various culture growing conditions. Zhur. mikrobiol., epid. i immun. 40 no.11:86-89 N '63. (MIRA 17:12)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

POKROVSKIY, V.N. (Kalinin)

Hydrodynamics of a viscous free jet taking surface tension into consideration. Inzh.zhur. 3 no.4:710-714 '63. (MIRA 16:12)

POKROVSKIY, V.N.

Simple derivation of the equation of state for polymers. Fiz. tver. tela 5 no.10:3018-3020 O '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh volokon, Kalinin.

OLESHKO, V.P., inzh.; SOLOVTSEV, D.G., inzh.; POKROVSKIY, V.N., inzh.

Impulse type controller. Masl.-zhir.prom. 28 no.11:40-42 N '62.
(MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Oleshko, Solovtsev). 2. Leningradskiy mylovarennyy zavod imeni Karpova (for Pokrovskiy).
(Leningrad--Soap industry--Equipment and supplies)
(Automatic control)

SERKOV, A.T.; CHERKASOVA, Ye.V.; KONKIN, A.A.; POKROVSKIY, V.N.

Effect of some factors on the formation process of the filament streams in the outflow of viscose. Khim. volok. no.3:32-37 '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Serkov, Cherkasova). 2. Moskovskiy tekstil'nyy institut (for Konkin). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut steklyanogo volokna (for Pokrovskiy).
(Rayon)

CHALDYSHEV, V.A.; POKROVSKIY, V.N.

Symmetry properties of energy zones in crystals with the chalcopyrite structure. Izv.vys.ucheb.zav.;fiz. no.2:173-181 '60.
(MIRA 13:8)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete im. V.V.Kuybysheva.
(Crystals)

POKROVSKIY, V.N. and SHMETER, S.M.

"The Dependence of the Readings of the Vane Anemometer Upon the Density of the Air."

SO: [Various Procedural Problems of Aerological Measurements]. No 12, 1953, page 18.

POKROVSKIY, V. I., SHMETER, S. M.

"Radiation Errors of the Comb-Type Radiosonde," Trudy TsAO No 14, 1955.

POKROVSKIY, V.N.

Method for calculating the vertical distribution of ozone in the atmosphere. Trudy TSAO no.16:21-25 '56. (MLRA 9:11)
(Ozone)

L 23469-66 EWT(1)/T JK

ACC NR: AP6014017 SOURCE CODE: UR/0016/65/000/009/0003/0006

AUTHOR: Timakov, V. D.; Skavronskaya, A. G.; Pokrovskiy, V. N.---Pokrovsky, V. N.

ORG: Institute of Epidemiology and Microbiology imeni Gamaleya, AMN SSSR

TITLE: Mechanism of the mutagenic action of 5-bromouracil

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 9, 1965, 3-6

TOPIC TAGS: DNA, RNA, streptomycin, biologic mutation, chromatography, brominated organic compound

ABSTRACT: The nucleotide composition of DNA from streptomycin - resistant mutants formed from an S. typhimurium No 70 culture under the action of 5-bromouracil was studied (cf. V. N. Pokrovskiy, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii Vol 41, No 1, 92, 1964; Vol 41, No 7, 51, 1964). Chromatographic separation indicated that the nucleotide composition of DNA of the mutants was the same as that of DNA of the initial culture: the same bases were present, while 5-bromouracil was absent. This indicated that the mutation mechanism involved changes in the structure of DNA rather than in composition. The changes in structure presumably consisted of replacement of one nucleotide pair by another due to faulty coupling of guanine with 5-bromouracil, as suggested by E. Friz [Fries]. The guanine-cutosine paid was then replaced by the adenine-thymine pair, or

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vice versa. It was shown in former work by Pokrovskiy that 5-bromouracil, in exerting its mutagenic activity, was included into the composition of DNA of bacterial cells of the initial culture undergoing mutation, but not into that of RNA of the cells. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 06, 07 / SUBM DATE: 05Aug64 / ORIG REF: 004 / OTH REF: 004

Card 2/2 90

TIMAKOV, V.D.; SKAVRONSKAYA, A.G.; POKROVSKIY, V.N.

Mechanism of the mutagenic action of 5-bromuracil. Zhur.mikrobiol., epid. i immun. 42 no.9:3-6 S '65.

(MIRA 18:12)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
Submitted August 5, 1964.

SKAVRONSKAYA, A.G.; BORISOVA, N.B.; POKROVSKIY, V.N.; NIKOLAYEVA, V.N.

Mechanism of the inhibiting effect of 5-bromouracil on the division of bacterial cells. Zhur.mikrobiol., epid. i immun. 42 no.12:92-97 D '65. (MIRA 19:1)

1. Institut epidemiologii i mikrobiologii imeni Gamaleya AMN SSSR.

SERKOV, A.T.; POKROVSKIY, V.N.

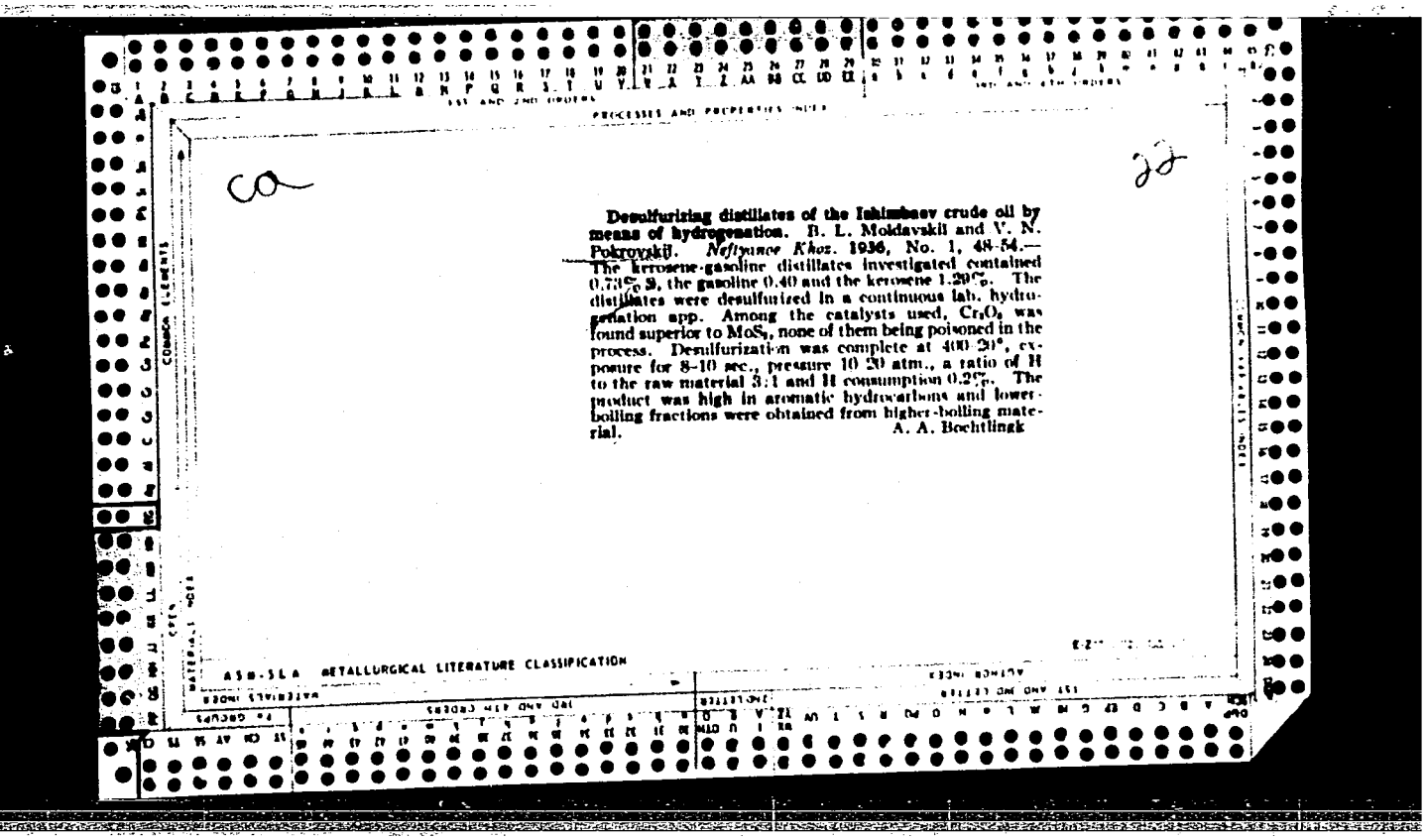
Causes of the structural nonuniformity of viscose fibers.
Khim. volok. no.5:32-35 '65. (MIRA 18:10)

1. Gosudarstvennyy komitet khimicheskoy promyshlennosti pri Gosplane SSSR (for Serkov). 2. Filial Instituta khimicheskoy fiziki AN SSSR (for Pokrovskiy).

POKROVSKIY, V.N.

Automatic remote control of soap in vats. Masl.-zhir.prom. 17 no.8:30-31 Ag '52. (MLRA 10:9)

1. Zavod imeni Karpova.
(Remote control) (Soap industry--Equipment and supplies)



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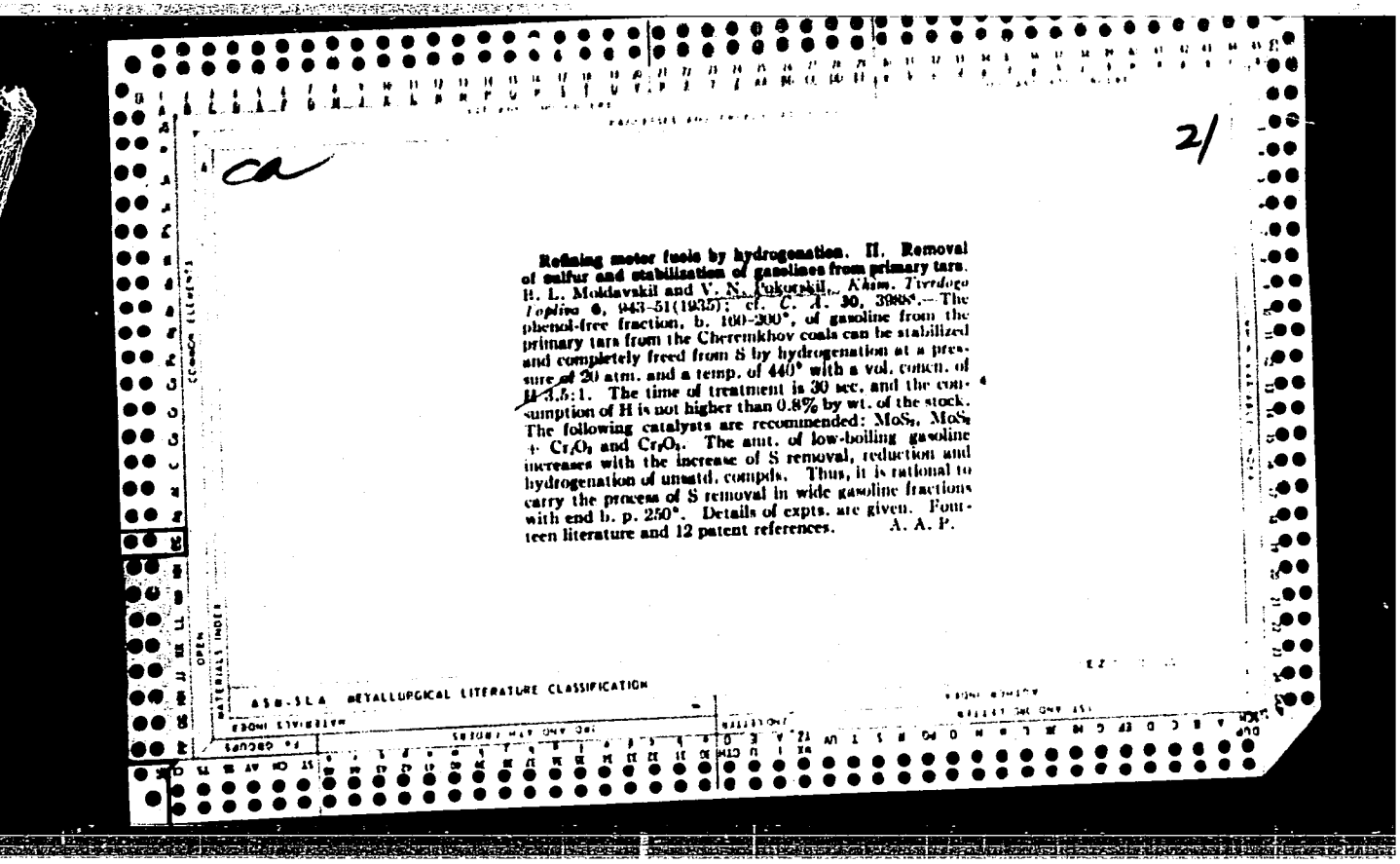
Desulfurizing distillates of the Ishimbaev crude oil by means of hydrogenation. B. L. Moldavskii and V. N. Pokrovskii. *Neftyanoe Khoz.* 1936, No. 1, 48-54.—The kerosene-gasoline distillates investigated contained 0.73% S, the gasoline 0.40 and the kerosene 1.20%. The distillates were desulfurized in a continuous lab. hydrogenation app. Among the catalysts used, Cr_2O_3 was found superior to MoS_2, none of them being poisoned in the process. Desulfurization was complete at 400-20°, exposure for 8-10 sec., pressure 10-20 atm., a ratio of H to the raw material 3:1 and H consumption 0.2%. The product was high in aromatic hydrocarbons and lower-boiling fractions were obtained from higher-boiling material.

A. A. Boehtlingk

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



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Refining motor fuels by hydrogenation. II. Removal of sulfur and stabilization of gasolines from primary tars. B. L. Moldavskii and V. N. Tukovskii. *Khim. Tverdogo Topliva* **6**, 943–51 (1935); cf. *C. A.* **30**, 3988⁸.—The phenol-free fraction, b. 100–200°, of gasoline from the primary tars from the Cheremkhov coals can be stabilized and completely freed from S by hydrogenation at a pressure of 20 atm. and a temp. of 440° with a vol. concn. of H 3.5:1. The time of treatment is 30 sec. and the consumption of H is not higher than 0.8% by wt. of the stock. The following catalysts are recommended: MoS_2, MoS_3 + Cr_2O_3 and Cr_2O_3. The amt. of low-boiling gasoline increases with the increase of S removal, reduction and hydrogenation of unsatd. compds. Thus, it is rational to carry the process of S removal in wide gasoline fractions with end b. p. 250°. Details of expts. are given. Fourteen literature and 12 patent references. A. A. P.

SKAVRONSKAYA, A.G.; POKROVSKIY, V.N.

Mutagenic action of 5-bromuracil on Salm. typhimurium. Vest. AMN SSSR 16 no.12:84-86 '61. (MIRA 15:2)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR.
(SALMONELLA TYPHIMURIUM) (URACIL)

POKROVSKIY, V.N.

Concerning the article "Some problems of designing and building of circulating water pipes for electric power stations." Vod.i san. tekh. no.4:35 Ap '56. (MLRA 9:8)
(Hydroelectric power stations) (Water pipes)

ABRAMOV, N.N., prof., doktor tekhn.nauk; GENIYEV, N.N., prof., doktor tekhn.nauk [deceased]; PAVLOV, V.I., dotsent, kand.tekhn.nauk [deceased]. Prinimali uchastiye: KLYACHKO, V.A.; KASTAL'SKIY, A.A.; POKROVSKIY, V.N.; MOSHNIN, L.F., prof., retsenzent; MINTS, D.M., prof., retsenzent; ABRAMOV, S.K., dotsent, retsenzent; BONDAR', F.I., inzh., retsenzent; KROTOV, I.N., kand.tekhn.nauk, nauchnyy red.; SMIRNOVA, A.P., red.izd-va; MEDVEDEV, L.Ya., tekhn. red.; SOLNTSEVA, L.M., tekhn.red.

[Water-supply engineering] Vodosnabzhenie. Izd.3., perer. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1958. 578 p. (MIRA 12:5)
(Water-supply engineering)

POKROVSKIY, Vladimir Nikolayevich,; SINEL'NIKOVA, L.N.,red.; FRIDKIN, A.M., tekhn. red.

[Water supply of thermoelectric power stations] Vodosnabzhenie teplovykh elektrostantsii. Izd. 2., perer. i dop. Moskva, Gos. energ. izd-vo, 1958. 167 p. (MIRA 11:12)
(Water supply, Industrial)
(Steam power plants)

DALKHSUREN, B.; LEVENBERG, I.Yu.; MURIN, A.N.; NORSEYEV, Yu.V.; POKROVSKIY, V.P.; YUTLANDOV, I.A.

Radioactive decay series $Yb^{164} \rightarrow Tu^{164} \rightarrow Er^{164}$. Izv.AN SSSR.Ser.fiz. 24 no.9:1105-1108 S '60. (MIRA 13:9)
(Ytterbium--Decay)

SPASSKIY, A.A., otv. red.; AVERIN, Yu.V., doktor biol. nauk, red.; VERINA, V.N., red.; KRUPENIKOV, I.A., kand. geol.-miner. nauk, red.; ODUD, A.L., kand. geogr. nauk, red.; POKROVSKIY, V.S., kand. biol. nauk, red.; USPENSKIY, G.A., kand. biol. nauk, red.; SHAPOSHNIKOV, L.K., kand. biol. nauk, red.; POSAZHENIKOVA, Ye., red.

[Transactions of the Fifth All-Union Conference on the Conservation of Nature] Trudy Vsesoiuznogo soveshchaniia po okhrane prirody. 5th. Kishinev, Kartia moldoveniaske, 1963. 267 p. (MIRA 17:11)

1. Vsesoyuznoye soveshchaniye po okhrane prirody. 5th, Kishinev, 1962. 2. Predsedatel' Komissii po okhrane prirody AN Moldavskoy SSR (for Odud). 3. Starshiy nauchnyy sotrudnik Komissii po okhrane prirody pri Gosplane SSSR (for Pokrovskiy). 4. Vitse-prezident AN Moldavskoy SSR. Deystvitel'nyy chlen AN Mold.SSR (for Spasskiy). 5. Zaveduyushchiy laboratoriyey pochvovedeniya Instituta pochvovedeniya i agrokhimii im. N.A.Dimo (for Krupenkov). 6. Institut zoologii AN Moldavskoy SSSR (for Averin).

POKROVSKIY, V.S.

Bandicoot rat (Nesokia indica). Trudy VNIO no.13:185-188 '53.
(MLRA 7:5)
(Rats)